

# CSI-Thermal Program

Public Forum

March 25, 2015

Presented by Mike Landau, CSI-Thermal Program Manager, SoCalGas



# California **Solar** Initiative

## Agenda

- CSI-Thermal Metrics
- CSI-Thermal Program Updates
- Statewide Marketing Update
- Q&A

# California **Solar** Initiative

## CSI-Thermal Metrics

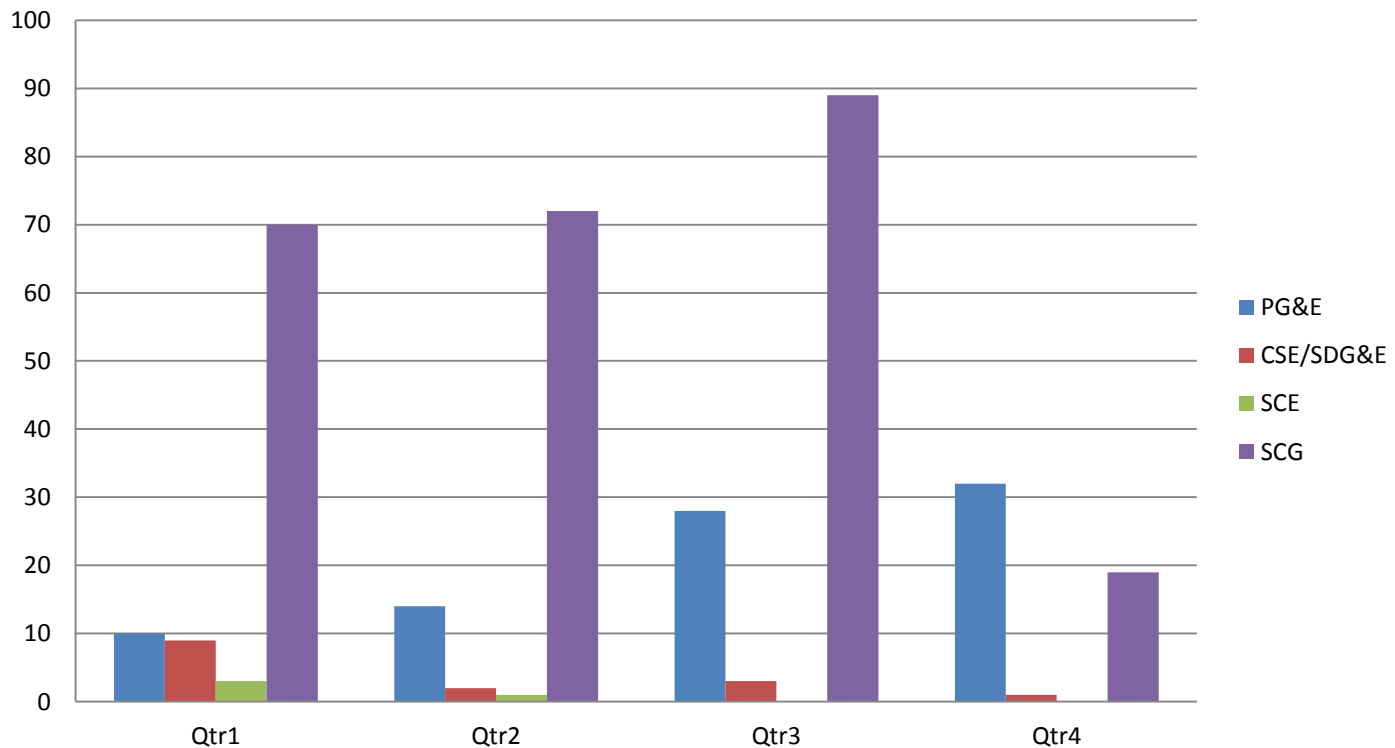
[www.csithermal.com/public\\_export](http://www.csithermal.com/public_export)



# California Solar Initiative

## Residential Application Volume

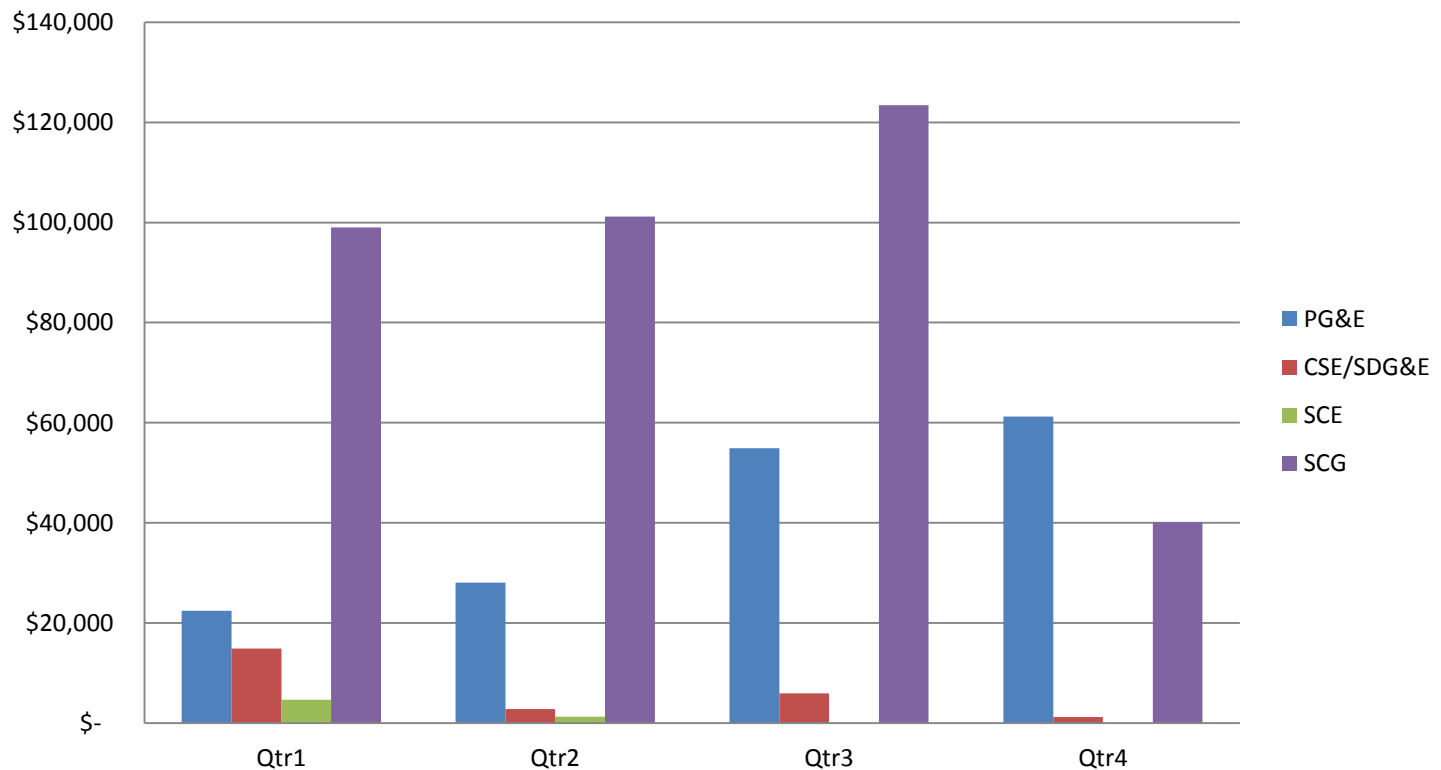
Residential Application Volume 2014



# California Solar Initiative

## Residential Incentives Paid

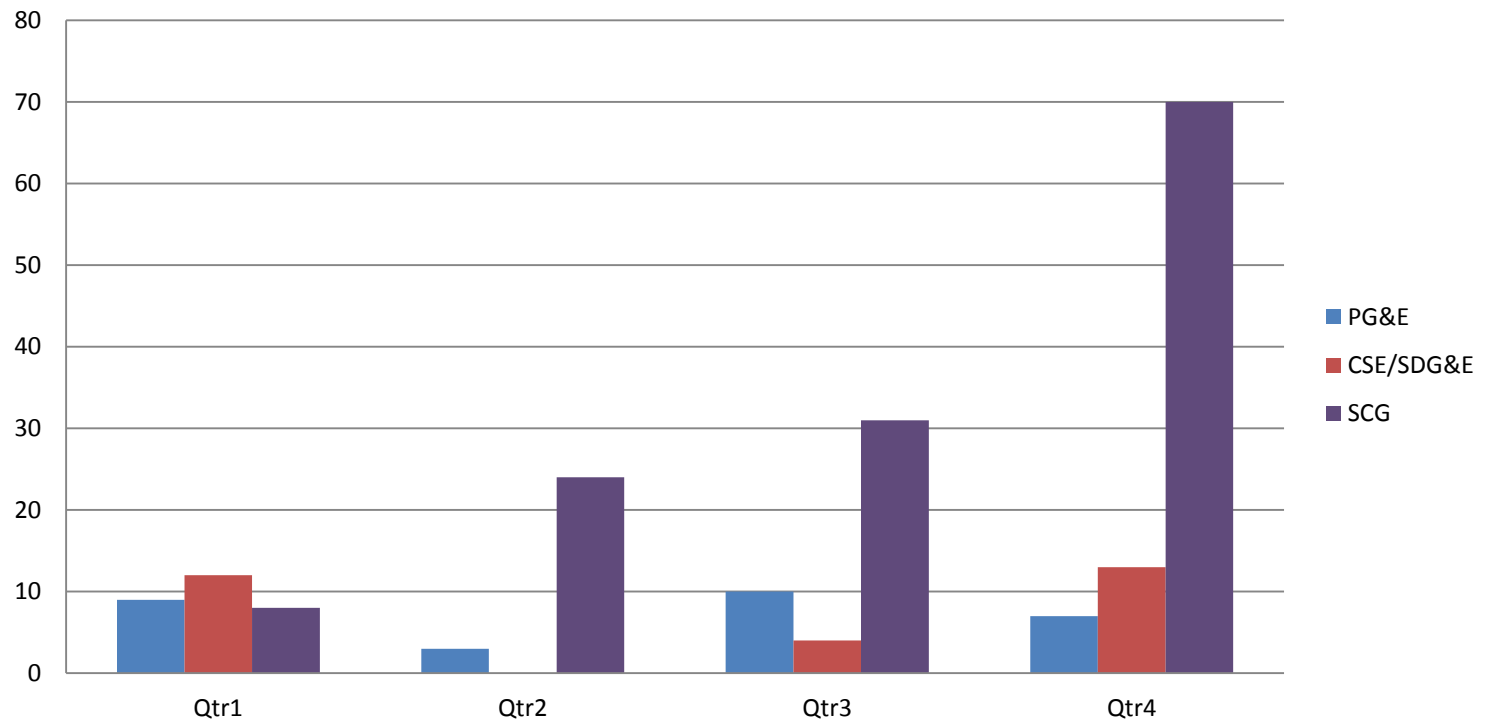
Residential Incentives Paid 2014



# California Solar Initiative

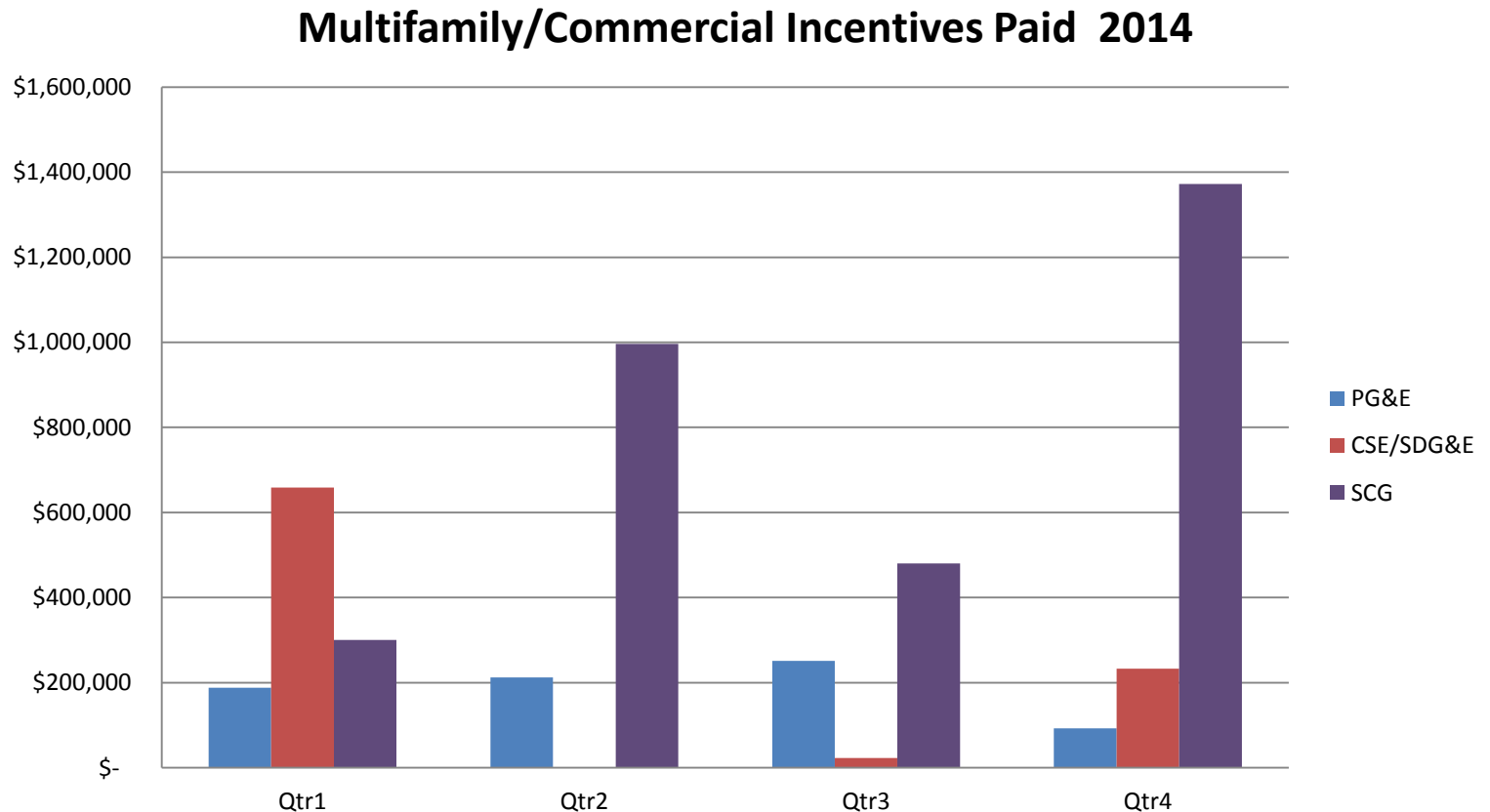
## Multifamily/Commercial Application Volume

Multifamily/Commercial Application Volume 2014



# California Solar Initiative

## Multifamily/Commercial Incentives Paid

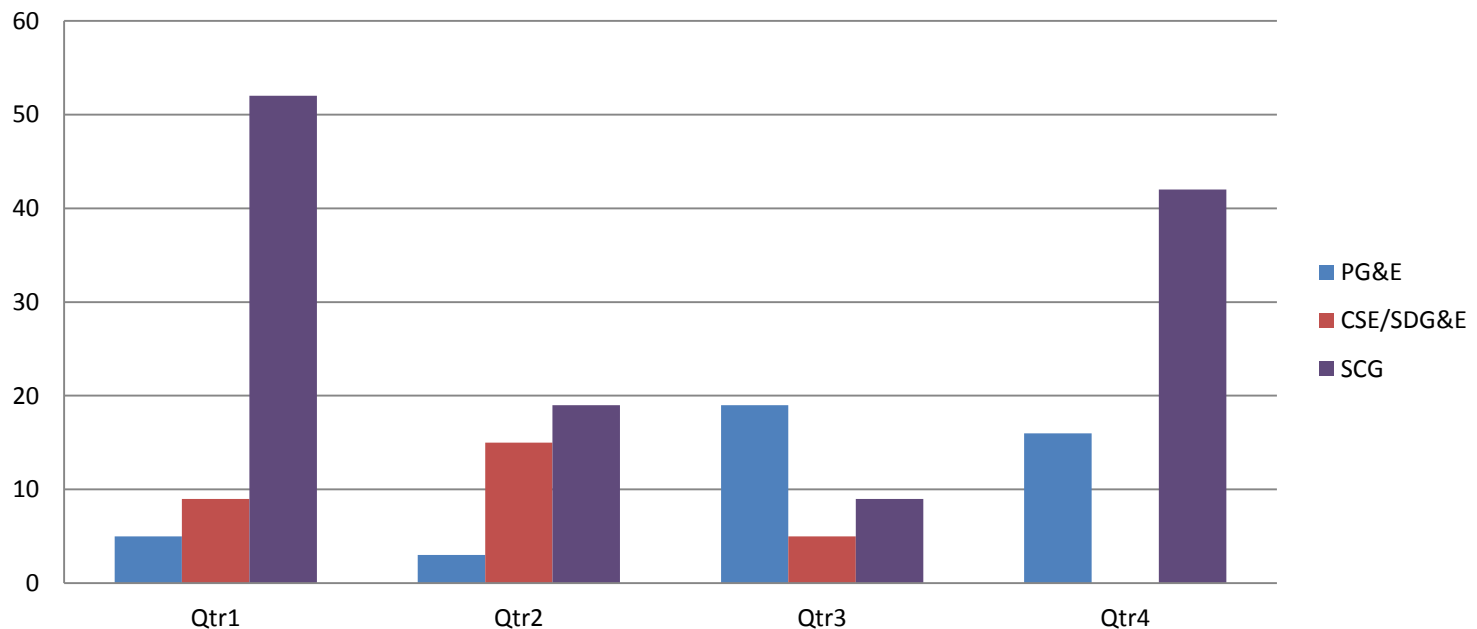




# California Solar Initiative

## Low Income Multifamily Application Volume

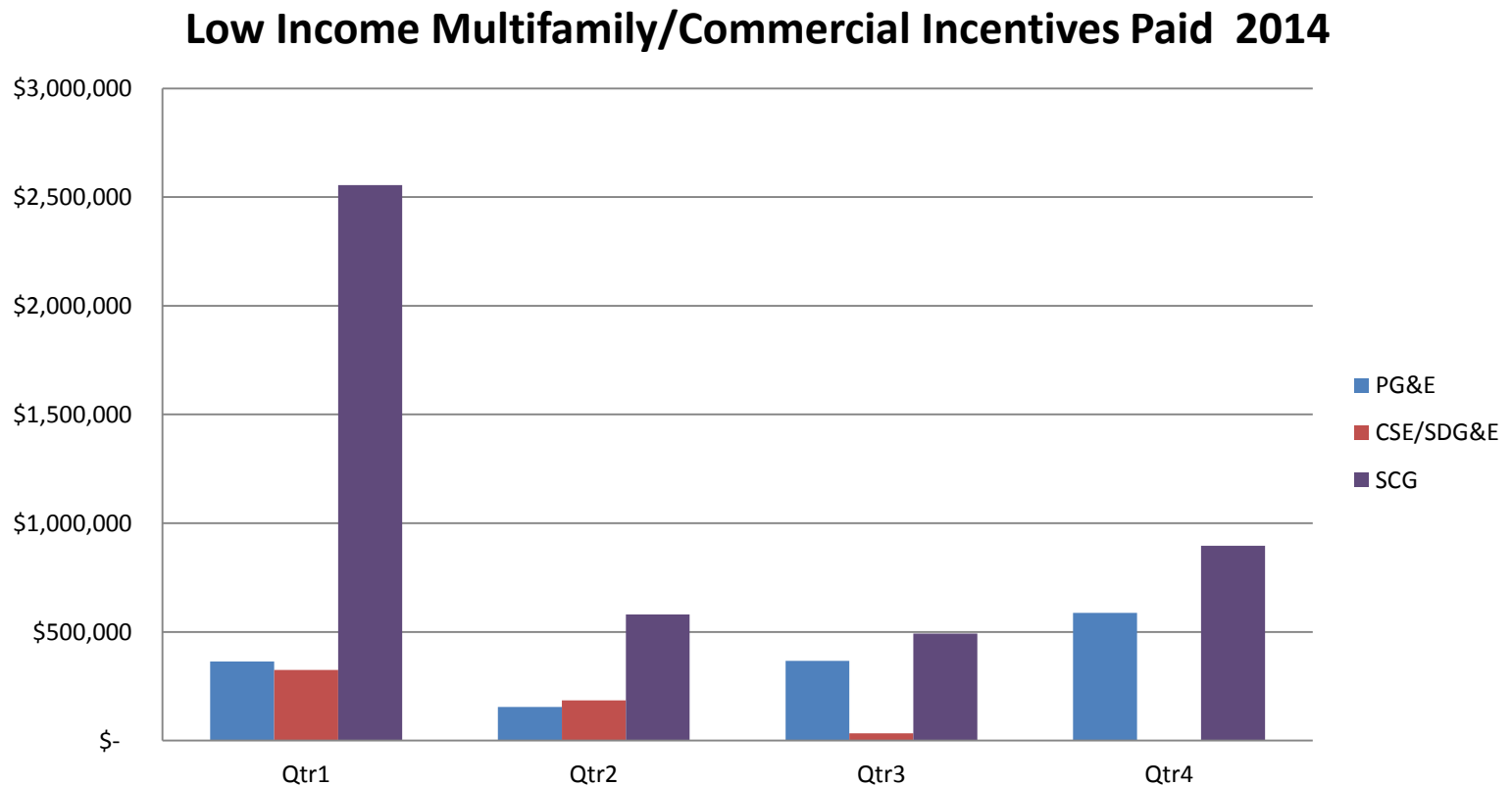
Low Income Multifamily/Commercial Application Volume  
2014





# California Solar Initiative

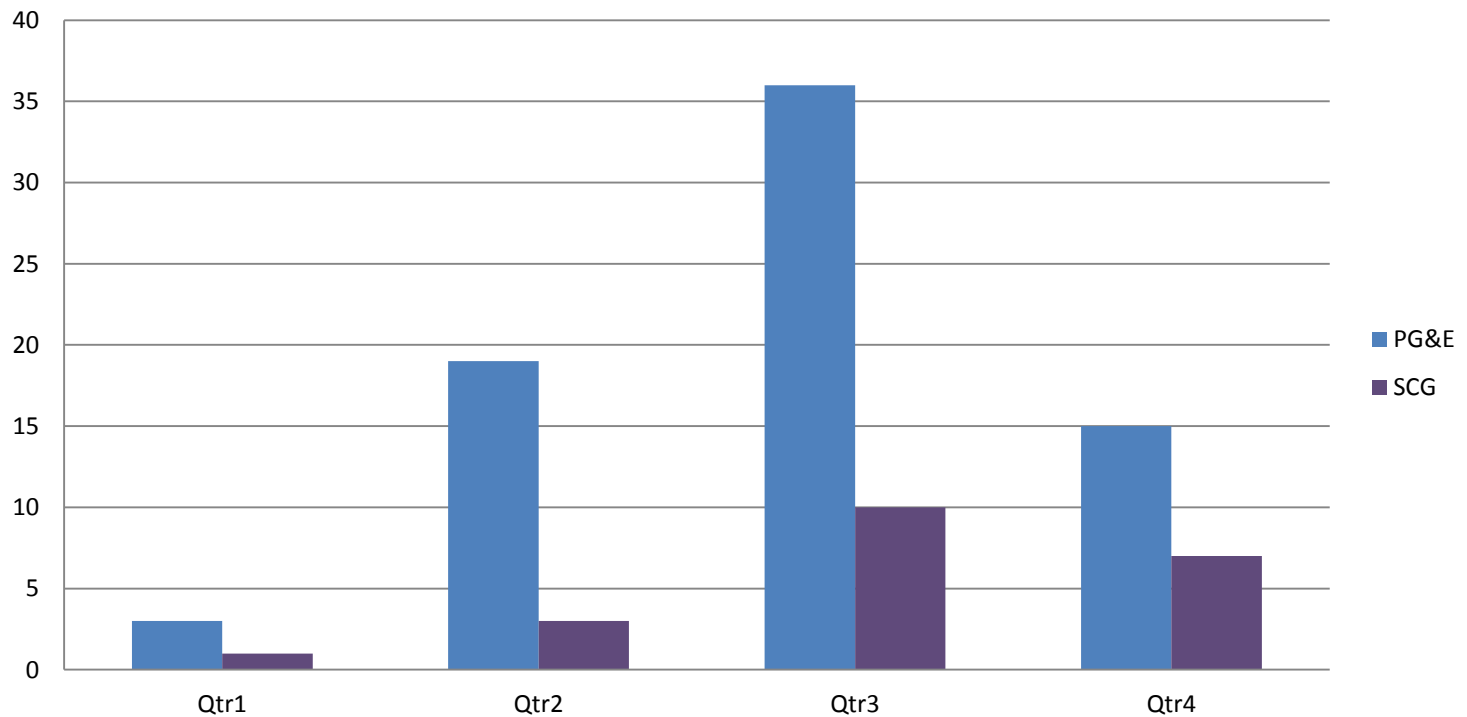
## Low Income Multifamily Incentives Paid



# California **Solar** Initiative

## Low Income Single Family Application Volume

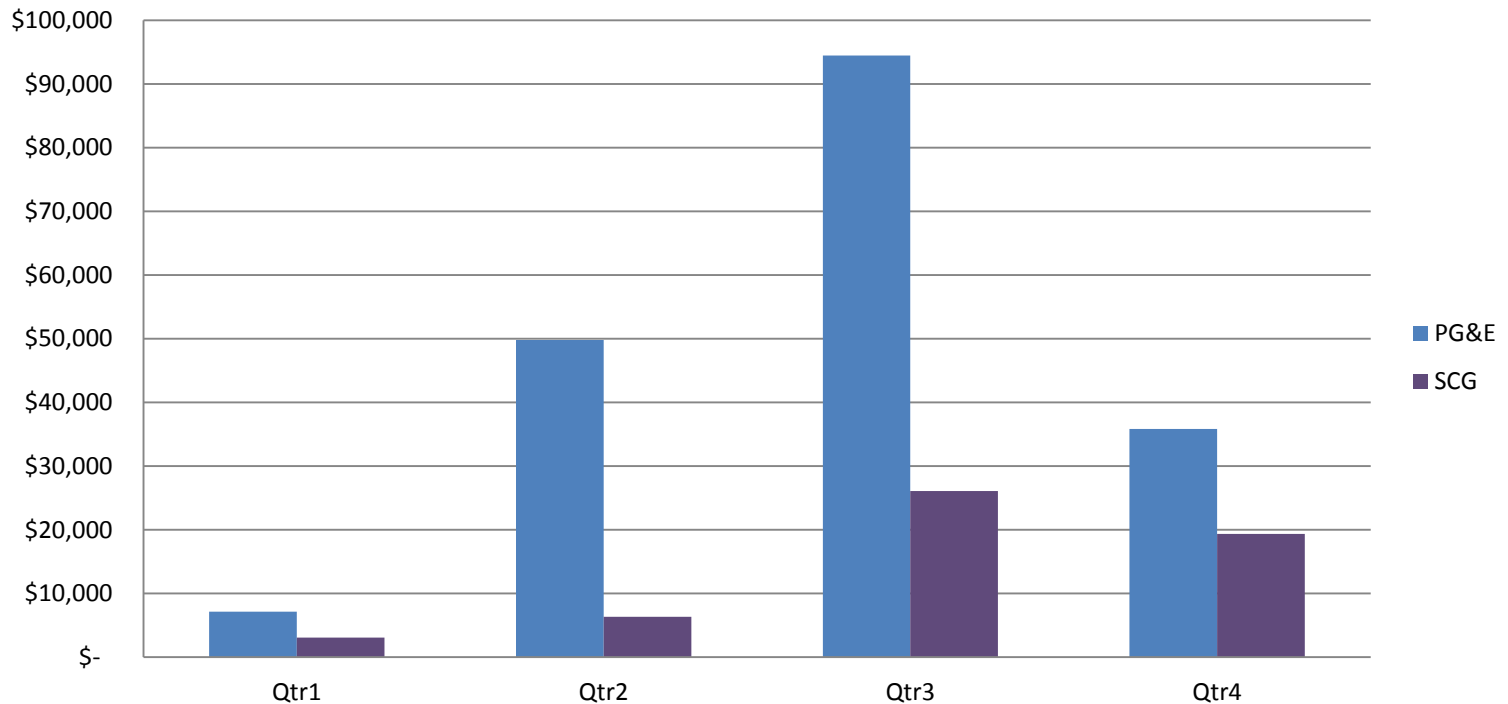
Low Income Single Family Application Volume 2014



# California Solar Initiative

## Low Income Single Family Incentives Paid

Low Income Single Family Incentives Paid 2014



# California **Solar** Initiative

## California Solar Thermal Statistics Website

- Regularly updated data – data on solar stats is updated biweekly from CSI Thermal Database.
- Easy-to-use interactive graphs – public graphs can be modified and manipulated to delve deep into data.
- Wide array of program information – data across climate zones, zip codes, costs with comparisons over time.
- Exportable data visualizations – Tableau data can be downloaded for offline use via Tableau Public, or can be exported to PDF files too!

# California **Solar** Initiative

## CSI-Thermal Program Updates



# California Solar Initiative

## Program Changes 2014 - 2015

### Advice Filing, CSI Thermal Program

- Approved by PUC on December 1, 2014.
- Reduced incentive rate for solar pools from \$7 per therm to \$5 per therm
  - Effective December 12, 2014
  - The previous rate was overly generous and offset a higher than anticipated portion of the installation costs.
- Solar pools are primarily affected

# California **Solar** Initiative

## Program Changes 2014 - 2015

### Petition to Modify (PTM) CSI Thermal Program

- Granted by PUC on January 29, 2015
- Modifies D. 12-08-008 and D. 13-08-004
- Allocations: 30% pools; 60% MF/Comm; 10% Residential
- Raise incentives for SF & MF/C
- MF/C cap from \$500,000 → \$800,000
- Incentive Cap on Pools; 50% system cost
- All other changes to Program can come via Advice Filing
- Proposed Step 1 incentive rate changes retroactive from July 23, 2014



# California Solar Initiative

## New Single Family Incentive Rates

### Natural Gas-Displacing Single-Family System Incentive Steps

Step	Incentive per annual therm displaced	Maximum Incentive Single-Family Residential Projects	Budget Allocation (in millions)
1	\$29.85	\$4,366	\$5,714,636
2	\$25.37	\$3,710	\$4,900,000
3	\$14.30	\$2,091	\$4,100,000
4	\$3.23	\$472	\$2,700,00

### Low Income Natural Gas-Displacing Single-Family System Incentive Steps

Step	Incentive per annual therm displaced	Maximum Incentive Low Income Single-Family Residential Projects
1	\$36.90	\$5,397
2	\$32.42	\$4,741
3	\$21.35	\$3,122
4	\$10.28	\$1,503

# California **Solar** Initiative

## New Multifamily/Commercial Incentive Rates

### Non-PBI Natural Gas-Displacing Multifamily/Commercial System Incentive Steps

Step	Incentive per annual therm displaced	Maximum Incentive Multifamily/Commercial Projects	Budget Allocation
1	\$20.19	\$800,000	\$42,307,184
2	\$17.16	\$800,000	\$29,400,000
3	\$10.15	\$800,000	\$24,600,000
4	\$3.13	\$800,000	\$16,200,000

### Non-PBI Low Income Natural Gas-Displacing Multifamily System Incentive Steps

Step	Incentive per annual therm displaced	Maximum Incentive Multifamily/Commercial Projects
1	\$24.89	\$800,000
2	\$21.86	\$800,000
3	\$14.85	\$800,000
4	\$7.83	\$800,000

# California **Solar** Initiative

## New Multifamily/Commercial PBI Incentive Rates

### PBI Multifamily and Commercial Natural Gas-Displacing System Incentive Steps

Step	Incentive per therm displaced	Maximum Incentive for Commercial/Multifamily solar thermal projects
1	\$10.10	\$800,000
2	\$8.58	\$800,000
3	\$5.08	\$800,000
4	\$1.57	\$800,000

### PBI Multifamily Low Income Natural Gas-Displacing System Incentive Steps

Step	Multifamily Low Income Incentive per therm displaced	Maximum Incentive Multifamily Low Income Projects
1	\$12.45	\$800,000
2	\$10.93	\$800,000
3	\$7.43	\$800,000
4	\$3.92	\$800,000

# California **Solar** Initiative

## Solar Pool Heating System Incentive Steps

Step	Incentive per Annual Therm Displaced for Solar Pools	Maximum Incentive Multifamily/Commercial Projects (not to exceed 50% of installation costs)	Budget Allocation
1	\$5.00	\$500,000	\$14,978,180
2	\$5.00	\$500,000	\$14,700,000
3	\$4.00	\$500,000	\$12,300,000
4	\$3.00	\$500,000	\$8,100,000

# California **Solar** Initiative

## Solar Pool CPM Clarification

- CPM still required for all systems over 30 kWth
- No equipment accuracy requirement for solar pool CPM
- Meter does not have to be from approved meter list
- An onsite or remote display of **continuous, cumulative BTU measurement** is required
  - Requires **continuous** flow measurement
  - Requires **continuous** temperature measurements

# California **Solar** Initiative

## **Solar Pool Covers Clarification**

Solar pool covers are not mandatory in order to receive a rebate.

- Calculator will automatically assume that a film cover is used 12 hours a day during the months of November through April on a year round pool
- The use of a cover will be assumed in the calculator even if no cover is used unless the applicant provides a code or permit statement that clearly prohibits the use of a cover for the pool in question
- A specific statement is required for every pool application for which a pool cover is prohibited in order to calculate the incentive without a pool cover. A claim of deniability of insurance is not acceptable.

# California **Solar** Initiative

## Pool Application Fee Update

### Application Fee Schedule for Solar Pool Systems

Capacity (kWth)		Capacity (kWth)		Application Fee
150	-	260	=	\$1,250
261	-	520	=	\$2,500
521	-	780	=	\$5,000
781	-	1,040	=	\$10,000
1,041	-	No Limit	=	\$20,000



# California **Solar** Initiative

## Freeze Protection for Year-Round Pools

For year-round solar pool systems, freeze protection must be automatic, by drainback or glycol.

### **Glycol systems:**

Active, closed loop glycol systems are protected by a mixture of propylene glycol and water in the collector loop. These systems are eligible for seasonal or year-round solar pool applications.

### **Drainback systems:**

Automatic gravity draining of collectors freeze protection is required for year-round solar pool systems

For collector mounting on flat roofs, use of manual draining is acceptable only for seasonal pools

# California **Solar** Initiative

## Freeze Protection for Seasonal Pools

- Manual draining of collectors freeze protection is allowed for seasonal solar pool systems
- **Flat Roofs:** For drainback systems (either open or closed loop) of commercial pools that are seasonal in Schedule of Operation with unglazed polymer collectors on flat roof with no gradient, manual drain valves may be installed to fully drain the collectors for winterization to prevent collectors from freeze damage.
- **Manual drainage:** a signed affidavit will be required stating that a maintenance agreement is in effect with contractor **OR** that the owner agrees to take responsibility for freeze protection measures by draining the solar system before the freeze-risk season begins.

# California **Solar** Initiative

## **DISQUALIFICATION FROM THE CSI-THERMAL PROGRAM** Update

An Applicant, Solar Contractor, System Owner, Seller, and/or Host Customer may be immediately disqualified from participating in the CSI-Thermal program if one or more of the following occurs:

- Solar Contractors that operate under a false CSLB number or another contractor's license
- Failure to disclose other incentives or funding sources such as rebates, grants, tax credits, government funding, and/or funding from any public or private source
- Installation of used solar thermal equipment, with the exception of de-scaled copper piping
- Claiming of an incentive for a system that was never installed
- Attempt to claim an incentive for ineligible equipment
- Submitting false information on the application in an attempt to collect more incentive dollars
- **Forged paperwork with or without consent of system owner and/or host customer**
- **Providing any false information to the Program Administrator or any CSI program participant (Applicant, Solar Contractor, System Owner, Seller and/or Host Customer)**
- **Submitting any paperwork requiring the system owner's and/or host customer's signature(s) without the system owner's and/or host customer's actual signature(s)**

# California **Solar** Initiative

## Low Income Incentive Budget Status

### **CSE/SDG&E**

- Reached the end of the low income incentive budget
  - Waitlist is in place
  - Applications processed on a first come first served basis

# California **Solar** Initiative

## **Marketing and Outreach Updates** **2014 Statewide Post-Campaign Research**



# California **Solar** Initiative

## 2014 Statewide Market Facilitation Plan

- The goal of the Statewide Market Facilitation Plan is to deliver a consistent and compelling message that leverages the learnings and successes of the past two years by focusing on increasing awareness and understanding, fostering engagement and encouraging consideration and adoption through an integrated approach among our key target audiences.
- The statewide program served as the overarching campaign to deliver messaging across service areas and worked in conjunction with the Local Market Facilitation Plans designed and implemented by each of the four PAs.



# California **Solar** Initiative

## Research Objective

To assess the effectiveness of the 2014 Statewide Solar campaign among the targeted segments, residential and business.

2014 online research addressed:

- Unaided and aided awareness of solar water heating
- Current attitudes, beliefs and behaviors about solar water heating
- Familiarity with solar water heating and proclivity to engage in related behaviors
- Consideration of installation of solar water heating
- Awareness of the CSI – Thermal Program

Research sample size: 1042 online participants (Residential, Commercial and Multi-Family)





# California **Solar** Initiative

## Research Findings

### Business

- Within the business segment, nearly all metrics show improvement (58%).
  - Awareness, consideration and likely to install SWH
  - Program enhancement, inclusion of pools, could be key for the increases within this segment
- Broadening of the target audience to include those who are not quite as “green,” contributed to a decline in key metrics among total residential respondents (30%).
  - However, when the two matching highly “green” samples are compared, many scores indicate as being unchanged.

# California **Solar** Initiative

## Attitudes and Perceptions

- Financial issues lead a list of disadvantages associated with solar water heating (47%).
  - “I like the idea, but it’s too expensive” and “it’s more affordable than photovoltaic panels.”
- Other notable disadvantages include issues of reliability and effectiveness (34%), concerns about compatibility and physical requirements.
- Awareness of the difference between solar PV panels and solar water heating collectors is strong (56% overall) and has improved among businesses (72%).

# California **Solar** Initiative

Q&A